

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended): A system for assisting regeneration of a particle filter integrated in an exhaust line of a motor vehicle diesel engine, the engine being associated with various units, including:

- means for admitting air into the engine;
- means for recycling exhaust gases from the engine to the inlet thereof;
- a turbocompressor;
- a particle filter;
- a common system for feeding fuel to the cylinders of the engine, including electrical fuel injectors associated with those cylinders;
- means for adding to the fuel an additive adapted to be deposited on the particle filter to reduce the combustion temperature of particles trapped therein;
- means for acquiring information relating to various operating parameters of the engine and the units associated therewith; and
- means for monitoring the operation of at least one of the air admission means, the recycling means, the turbocompressor and the fuel feeding system in order to monitor the operation of the engine, these monitoring means being further adapted to trigger a phase of

regeneration of the particle filter by combustion of the particles trapped therein by triggering a phase of multiple injection of fuel into the cylinders of the engine during their expansion phase;

wherein the particle filter is impregnated with a catalyst for oxidizing hydrocarbons and CO present in the exhaust gases flowing through said particle filter, and

wherein the particle filter has a region that is more strongly impregnated with the oxidation catalyst,

wherein said more strongly impregnated region is situated at the centre of the cross-section of the particle filter.

2. (Previously presented): A system according to claim 1, wherein said catalyst is a metal or a mixture of metals.

3. (Previously presented): A system according to claim 2, wherein said metal is a group VIII metal, such as platinum, palladium, or rhodium, or a mixture of such metals.

4-6. (Canceled)

7. (Currently amended): A system according to ~~claim 5~~ claim 1, wherein the area of said more strongly impregnated region represents from 20% to 70% of the cross-section of said particle filter.

8. (Currently amended): A system ~~according to claim 1, wherein~~ for assisting regeneration of a particle filter integrated in an exhaust line of a motor vehicle diesel engine, the engine being associated with various units, including:

- means for admitting air into the engine;
 - means for recycling exhaust gases from the engine to the inlet thereof;
 - a turbocompressor;
 - a particle filter;
 - a common system for feeding fuel to the cylinders of the engine, including electrical fuel injectors associated with those cylinders;
 - means for adding to the fuel an additive adapted to be deposited on the particle filter to reduce the combustion temperature of particles trapped therein;
 - means for acquiring information relating to various operating parameters of the engine and the units associated therewith; and
 - means for monitoring the operation of at least one of the air admission means, the recycling means, the turbocompressor and the fuel feeding system in order to monitor the operation of the engine, these monitoring means being further adapted to trigger a phase of regeneration of the particle filter by combustion of the particles trapped therein by triggering a phase of multiple injection of fuel into the cylinders of the engine during their expansion phase;
- wherein the particle filter is impregnated with a catalyst for oxidizing hydrocarbons and CO present in the exhaust gases flowing through said particle filter,

wherein the particle filter has a region that is more strongly impregnated with the oxidation catalyst, and

wherein the more strongly impregnated region occupies from 10% to 50% of the length of the particle filter starting from its inlet face.

9. (Previously presented): A system according to claim 2, wherein the terminal portion of the particle filter is not impregnated with the oxidation catalyst.